Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at http://about.jstor.org/participate-jstor/individuals/early-journal-content.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

BOTANY.[1]

PLANCHON'S REVISION OF THE AMPELIDEÆ.—In the recently received Part 2 of the fifth volume of De Candolle's Monographiæ Phanerogamarum, J. E. Planchon makes a thorough revision of the Ampelideæ. Such considerable changes are introduced in the synonymy that it may be well to present a summary of the work here.

The order is restricted somewhat from the limits assigned it by Bentham and Hooker in the *Genera Plantarum*, by the exclusion of Leea with its twenty species or so. The remaining species (386) are distributed among ten genera, instead of two, as in the *Genera Plantarum.* It will be remembered that in the latter work the authors reduced almost everything to one genus—Vitis. Planchon, on the contrary, divides the old genera and constructs several new ones. The following abridged conspectus of the genera will serve to show their principal characters, and the method pursued in differentiating them :—

Flowers polygamo-diœcious; petals 5, cohering; style (short) conical; hypogynous glands 5; berries two-celled, 2–4 seeded; climbing shrubs with simple, variously lobed leaves.........I. *Vitis.*

Flowers polygamo-monœcious; petals 5 (rarely 4), spreading; style short-conical; disk annuliform, erect; berries two-celled, 2–4 seeded; climbing shrubs with simple or palmate or palmately compound leaves..................................II. *Ampelocissus.*

Flowers polygamo-monœcious; petals 4–5, spreading; style short; disk annuliform; berries two-celled, 2–4 seeded; shrubs with undivided or palmatisect leaves.... ....III. *Pterisanthes.*

Flowers polygamo-monœcious; petals 5, free, spreading; style long, subulate; disk cup-like; berries two-celled, 2–4 seeded; shrubs, with 5–3 foliate leaves......................IV. *Clematicissus.*

Flowers polygamo-diœcious; petals 4, expanding; style short; stigma 4 lobed; disk hypogynous; berries 2–4 seeded; shrubs with pedate leaves..V. *Tetrastigma.*

Flowers polygamo-monœcious; petals 5, expanding; style short; disk 5 lobed, adnate to ovary; berries 2 celled, 3–4 seeded; shrubs with 3-foliate leaves......................................VI. *Landukia.*

Flowers hermaphrodite; petals 5, spreading; style subulate, thick; disk obsolete; berries 1–2 seeded; climbing shrubs with digitate or palmatilobed leaves..................VII. *Parthenocissus.*

Flowers hermaphrodite; petals 5 (rarely 4), spreading; style subulate; disk cup-like, 5 (rarely 4) lobed; berries 1–2 celled, 1–4 seeded; climbing shrubs with leaves from simple to pinnately compound............. ....VIII. *Ampelopsis.*

---

[1] Edited by Prof. Chas. E. Bessey, Lincoln, Neb.

Flowers hermaphrodite or pseudo-hermaphrodite; petals 5–7, thick, spreading; disk annular; berries 1–2–3–4 seeded; climbing shrubs with trifoliate, unifoliate, undivided or palmatilobed leaves. ....IX. *Rhoicissus.*

Flowers hermaphrodite; petals 4, spreading or sometimes cohering; style subulate, slender; disk cup-like; berries 1–2–3–4 seeded; creeping, erect or climbing shrubs with undivided, lobed or compound leaves...X. *Cissus.*

The species of Vitis are arranged in two sections, viz., I. Euvitis and II. Muscadinia, the former containing seven series. The disposition of our North American species under this arrangement is as follows —

Section I. EUVITIS.

Series 1. Labruscæ.

V. labrusca L. Fox Grape. Atlantic States.

Series 2. Labruscoideæ.

V. candicans Engelm. Mustang Grape. Texas.
V. caribæa D. C. South Florida.

Series 3. Æstivales.

V. æstivalis Michx. Summer Grape. Atlantic States and Mississippi Valley.
V. lincecumii Buckl. (= *V. æstivalis* Michx., var. lincecumii Engelm). Post Oak Grape. Texas.

Series 4. Leucobryæ.

V. californica Benth. California.
V. arizonica Engelm. Arizona.

Series 5. Cinerascentes.

V. berlandieri Planch. (= *V. monticola* Durand in Bull. Soc. d'Acclim., ix., p. 434,— *V. monticola* Engelm. in Bush. Cat.— *V. æstivalis* A. Gray in Plantæ Lindheimerianæ). Texas and New Mexico.
V. cinerea Engelm. (= *Vitis æstivalis* Michx. var.? *cinerea* Engelm. in Gray's Manual, p. 679). Mississippi Valley from Illinois southward.
V. coriacea Shuttl. (= *V. caribæa*? in Chapman's Flora of the Southern States.— *V. candicans* in Watson's Bibliographical Index to N. A. Botany). South Florida to Louisiana.

Series 6. Rupestres.

V. rupestris Scheele. Sugar Grape. Tennessee, Missouri and southwestward.

Series 7. Cordifolio-Ripariæ.

- *V. cordifolia* Michx. Frost Grape. New York to Nebraska, and southward to the Gulf of Mexico.
- *V. riparia* Michx. Riverside Grape. Labrador to Florida, and West to the Rocky Mountains. This species includes the form *palmata* of Engelm.
- *V. rubra* Michx. Tennessee to Missouri and southward. Related to, and generally confused with, the preceding species.

Section II. MUSCADINIA.

- *V. rotundifolia* Michx. (= *V. vulpina* L. in Gray's Manual, p. 113). Muscadine Grape. Maryland and Kentucky to Arkansas and southward.

Two other species are described, but for want of full material their places in the adopted scheme are not assigned. They are:—

- *V. araneosa* Leconte, from northern Georgia and Illinois.
- *V. monticola* Buckley, from Texas. This is regarded by Watson (Bibl. Index N. A. Bot., p. 171) as a variety of *V. æstivalis* Michx.

The genus Parthenocissus includes seven species, one of which is *P. quinquefolia* Planch., the well-known "Virginia Creeper," of the United States, hitherto known as *Ampelopsis quinquefolia* Michx. In this genus is found, also, the Japan Creeper (*Ampelopsis veitchii* of the gardeners), hereafter to bear the name of *P. tricuspidata* Planch.

Ampelopsis, as now restricted, contains two North American species, viz., *A. cordata* Michx. (= *Vitis indivisa* Willd. of Gray's Manual, p. 113), and *A. bipinnata* Michx. (= *Vitis bipinnata* Torr. and Gr. of Gray's Manual l. c. and *V. arborea* L. of Watson's Bibl. Index N. A. Bot., p. 171).

Cissus now includes 214 species, of which but three are found within the United States, viz., *C. sicyoides* L., with many subvarieties or forms, of which *floridana* occurs in southern Florida; *C. acida* L., southern Florida; *C. incisa* Desm., Florida to Texas.—*Charles E. Bessey.*

POSTAL REGULATIONS AS TO BOTANICAL SPECIMENS.—In a communication dated Feb. 11th, 1888, to Dr. Charles R. Barnes, of the University of Wisconsin, the Third Assistant Postmaster-General makes the following ruling, viz.:—

"Under the recent Act of Congress in relation to permissible printing and writing upon second, third and fourth class matter, there may be placed upon specimens of dried plants, or on any other natural history specimens, to be transmitted by mail, without subjecting them to other than fourth-class rate of postage, labels bearing the written name of the specimens, locality and date of collection, and the collector's name—where these inscriptions are wholly for purpose of identification or description."

Ordinary botanical labels which had been submitted by Dr. Barnes were accepted as permissible.

THE GERMINATION OF DODDER.—In some recent investigations on germinating Dodder (*Cuscuta gronovii*) we have observed an interesting fact in regard to the manner of separating itself from the soil which we have not found mentioned elsewhere. When the plant has reached something adapted to its needs as a parasite—*Forsythia viridissima* in our observations—it winds about it loosely at first, then after the manner of a tendril quickly contracts, bringing its coils close to the host, that the haustoria may penetrate the bark. This contraction pulls up the root, leaving it loosely hanging by the host, sometimes half an inch above the soil, where it withers and dries.—*Henrietta E. Haaker, Botanical Lab., Mt. Holyoke Sem., Feb.* 17, 1888.

THE FOSSIL FORESTS OF THE YELLOWSTONE NATIONAL PARK.—At the February meeting of the Washington Biological Society, Professor Knowlton gave an account of a visit to these fossil forests, which are located mostly in the northeastern portion of the park, a locality rarely visited by tourists. The largest isolated trunk seen was twenty-six feet in circumference, without the bark, and twelve feet in height. In the edge of a cliff trunks are exposed to a height of thirty feet. Specimens from about 300 of these trees are now being identified. They represent about twenty species, including the genera Pinus, Sequoia, and Taxus.

NEW SPECIES OF UREDINEÆ.—At the February meeting of the Washington Biological Society a paper was read by B. T. Galloway describing seven new western Uredineæ collected by Tracy and Evans in 1887, and named by Tracy and Galloway. They were *Uromyces arizonica, Puccinia fragilis, Puccinia caulicola, Puccinia vertisepta, Æcidium draba, Æcidium heliotropii,* and *Æcidium ellisii.* It is to be hoped that the authors will also publish their descriptions in the *Journal of Mycology*, in which, in our opinion, all descriptions of our fungi ought to appear.

BOTANICAL NEWS.—The announcement is made that Dr. Lorenzo G. Yates, of Santa Barbara, California, with the assistance of J. G. Baker, of Kew (England), will soon bring out a book entitled "All Known Ferns," which will consist of an alphabetical list (generic and specific) of all the ferns of the world. It is not to include descriptions, but references are to be given in every instance to descriptions. Synonyms will be given, and the distribution of every species will be indicated. It promises to be a very useful book.——Miss Jane H. Newell, of Cambridge, Mass., has begun the publication, in parts, of a little work to be called "Outlines of Lessons in Botany," designed to be of use to teachers who wish to do more than follow the old methods of botanical teaching. The lessons outlined "are suitable for children of twelve years of age and upwards." Directions are given for raising seedlings, and for making observations upon them in their growth. The parts before us are privately printed, in order to have them tested by other teachers before publication. They may be obtained by any teacher who will use them experimentally, by addressing the author at 175 Brattle street, Cambridge.——DeBary's Lectures upon Bacteria, English translation, has been received from Macmillan & Co. It is a small work, of a sufficiently popular style to enable any well-educated man to get a good idea of the subject. A fuller notice will appear later.——Detmer's Pflanzenphysiologische Praktikum, from Gustav Fischer, of Jena, promises to be a most valuable book in the botanical laboratory. It is an octavo of 352 pages, and is illustrated with 131 wood-cuts.——Dawson's "Geological History of Plants" is an interesting volume of the International Scientific Series, which has just appeared. The style is popular, but the treatment is thoroughly scientific.

ZOOLOGY.

Conjugation of the Infusoria.—The following abstract of M. E. Maupas's observations on the conjugation of the Infusoria (*Comtes Rendus*, 1887, p. 356–9) is taken from the *Journal of the Royal Microscopical Society*. The micronucleus is a hermaphrodite sexual element, of sole importance in conjugation. In the stage (A) it increases in size; it then divides twice (B and C), and eliminates the corpuscles de rebut. This effected, it divides again (D), differentiating a male and female pronucleus. In the next stage (E) the male elements of the two conjugating Protozoa are exchanged, and the new male nucleus fuses with the original female portion. In the next two stages (F and G) the nuclear dualism characteristic of the Ciliata is re-established (the old macronucleus having broken up and been eliminated meanwhile). In the last stage (H) the ex-conjugates reassume their original organization before dividing for the first time.

What is the meaning of all this? There is no special sexual reproduction or generation. There is no acceleration of division after conjugation. It is a period of risk, especially during the